



CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 :2005



Job No.: CTCE/BBMP/W.No.04/NLR/CSR-7/894d/CEMENT/2015-16



Date: 15.07.2015

TEST REPORT ON CEMENT

* CUSTOMER	: Asst. Executive Engineer, Yelahanka New Town Sub Division, BBMP, Bangalore.
* AGENCY	: Mr. N. Lokanathreddy, No.05, Kaverinagara, 7 th Cross, Kavalbyrasandra, R.T. Nagara Post, Bangalore - 32.
* NAME OF THE WORK	: Construction of concrete road 22 nd Cross in 3 rd Phase beside TATA Institute in Ward No.04, BBMP, Bangalore.
* REFERENCE	: BBMP/AEE/YNSD/221/2015-16
SAMPLE ID	: Cement
SAMPLE RECEIVED ON	: 13.07.2015
PERIOD OF TESTING	: 13.07.2015 to 15.07.2015

The results of the tests conducted on the cement sample are as follows:

Sl. No	Descriptions	Test Method as per IS	Test Result	Requirements as per IS: 8112-2013
1	Standard Consistency	IS-4031 (Part-4) 1988(RA-2009)	28.50 %	
2	a) Initial Setting Time	IS-4031 (Part-5) 1988(RA-2009)	165 Minutes	Not Less than 30 Minutes
	b) Final Setting Time	IS-4031 (Part-5) 1988(RA-2009)	470 Minutes	Not More than 600 Minutes
3	Soundness by Le Chatelier Method	IS-4031 (Part-3) 1988(RA-2009)	1 mm	Not more than 10mm

Information is furnished by the Customer/Representative.

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Job No.: CTCE/BBMP/W.No.04/NLR/CSR-7/894d/SAND-Gradation/2015-16

: 15.07.2015

TEST REPORT ON DETERMINATION GRADATION OF FINE AGGREGATES

* Customer : Asst. Executive Engineer, Yelahanka New Town Sub Division, BBMP, Bangalore.

* Agency : Mr. N. Lokanathreddy,
No.05, Kaverinagara, 7th Cross, Kavalbyrasandra, R.T. Nagara Post, Bangalore - 32.

* Name of Work : Construction of concrete road 22nd Cross in 3rd Phase beside TATA Institute in Ward No.04, BBMP, Bangalore.

Reference : BBMP/AEE/YNSD/221/2015-16

Technical Reference : IS : 2386 Part 1 - 1963 RA-2007

Sample ID : Fine Aggregates

Sample Received on : 13.07.2015

Date of Testing : 15.07.2015



Total Wt. of Aggregates in gms 1000

Is Sieve Size in mm	Cumulative Weight Passing in %	Specific Limits as per IS 383-1970 (RA- 2007)			
		Zone-I	Zone-II	Zone-III	Zone-IV
10	100	100	100	100	100
4.75	94.00	90-100	90-100	90-100	95-100
2.36	74.80	60-95	75-100	85-100	95-100
1.18	52.30	30-70	55-90	75-100	90-100
600 Micron	33.00	15-34	35-59	60-79	80-100
300 Micron	14.50	5-20	8-30	12-40	15-50
150 Micron	4.50	0-10	0-10	0-10	0-15

* Information is furnished by the Customer/Representative

Remarks : This sample is under Zone-I specific limits.

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Job No.: CTCE/BBMP/W.No.04/NLR/CSR-7/894d/AGG/GR/2015-16

15.07.2015

TEST REPORT ON DETERMINATION GRADATION OF COARSE AGGREGATES

* Customer : Asst. Executive Engineer, Yelahanka New Town Sub Division, BBMP, Bangalore.

* Agency : Mr. N. Lokanathreddy,
No.05, Kaverinagara, 7th Cross, Kavalbyrasandra, R.T. Nagara Post, Bangalore – 32.

* Name of Work : Construction of concrete road 22nd Cross in 3rd Phase beside TATA Institute in Ward No.04, BBMP, Bangalore.

Reference : BBMP/AEE/YNSD/221/2015-16

Technical Reference : IS : 2386 Part 1 -1963 RA-2007

Sample ID : Coarse Aggregates (40mm)

Sample Received on : 13.07.2015

Date of Testing : 15.07.2015



Total Wt. of Aggregates in gms= 10000

Is Sieve Size in mm	Cumulative Weight Passing in %	Specific Limits as per IS 383-1970 (RA- 2007)	
		Graded	Single Sized
80	100	100	-
63	100	-	100
40	98.50	95-100	85-100
20	40.00	30-70	0-20
10	14.90	10-35	0-5
4.75	1.40	0-5	-

* Information is furnished by the Customer/Representative

Remarks : This sample is under Graded specific limits.

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Job No : CTCE/BBMP/W.No.04/NLR/STEEL/2015-16

15.07.2015

TEST REPORT ON REINFORCEMENT STEEL

Customer : **Asst. Executive Engineer**, Yelahanka New Town
Sub Division, BBMP, Bangalore.

Agency : **Mr. N. Lokanathreddy**,
No.05, Kaverinagara, 7th Cross, Kavalbyrasandra, R.T.
Nagara Post, Bangalore – 32.

Name of the work : Construction of concrete road 22nd Cross
in 3rd Phase beside TATA Institute in Ward No.04,
BBMP, Bangalore.

Reference : BBMP/AEE/YNSD/221/2015-16

Date of Test : 15.07.2015

Technical Reference : IS: 1786-2008



Sl. No	Nominal size (dia) (mm)	Mass per metre (Kg/mtr)	TENSILE STRENGTH			Bend Test	Rebend Test
			0.20% proof stress/Yield stress N/mm ²	Tensile strength (Ultimate stress) N/mm ²	Elongation percent gauge length		
1	10	0.62	513	556	13.15	O.K	O.K

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Job No.: CTCE/BBMP/W.No.04/N1.R/WMM/Gradation/2015-16



15.07.2015

GRADATION FOR WMM MORTH TABLE-400-11

Customer : Asst. Executive Engineer, Yelahanka New Town Sub Division, BBMP, Bangalore.

Agency : Mr. N. Lokanathreddy,
No.05, Kaverinagara, 7th Cross, Kavalbyrasandra, R.T. Nagara Post, Bangalore - 32.

Name of Work : Construction of concrete road 22nd Cross in 3rd Phase beside TATA Institute in Ward
No.04, BBMP, Bangalore.

Reference : BBMP/AEE/YNSED/221/2015-16

Date of Testing : 15.07.2015

Material : WMM

Sample Location : WMM Mix Plant

Oven Dry Wt (gm): 7930

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Spec.Limits
53	0	0	0	100	100
45	325	325	4.1	95.9	95-100
22.4	2605	2930	36.9	63.1	60-80
11.2	1340	4270	53.8	46.2	40-60
4.75	1215	5485	69.2	30.8	25-40
2.36	855	6340	79.9	20.1	15-30
0.600	790	7130	89.9	10.1	8-22
0.075	650	7780	98.1	1.9	0-8

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Job No: CTCE/BBMP/W.No.04/NLR/CSR-7/894d/CUBE/2015-16

17.08.2015

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

- * Customer : Asst. Executive Engineer, Yelahanka New Town Sub Division, BBMP, Bangalore.
- * Agency : Mr. N. Lokanathreddy,
No.05, Kaverinagara, 7th Cross, Kavalbyrasandra, R.T. Nagara Post,
Bangalore - 32.
- * Name of the work : Construction of concrete road 22nd Cross in 3rd Phase beside TATA
Institute in Ward No.04, BBMP, Bangalore.
- * Reference : BBMP/AEE/YNSD/221/2015-16
- * Sample ID : Pavement Concrete
- Size of cubes : 150mmx150mmx150mm
- Cross Sectional Area : 22500 mm²
- Technical Reference : IS: 516-1959 (Reaffirmed 2008)
- * Grade of Concrete : M₁₅



Compressive Strength as on : 28th day

Sample Received on : 20.07.2015

Sl.No.	* Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm ²)
1	20.07.2015	17.08.2015	8.132	353.6	15.72
2	20.07.2015	17.08.2015	8.259	370.5	16.47
3	20.07.2015	17.08.2015	8.307	379.6	16.87

* Information is furnished by the Customer/Representative

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Job No.: CTCE/BBMP/W.No.04/NLR/CSR-7/894d/CUBE/2015-16

22.08.2015

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

- * Customer : Asst. Executive Engineer, Yelahanka New Town Sub Division, BBMP, Bangalore.
- * Agency : Mr. N. Lokanathreddy,
No.05, Kaverinagara, 7th Cross, Kavalbyrasandra, R.T. Nagara Post,
Bangalore - 32.
- * Name of the work : Construction of concrete road 22nd Cross in 3rd Phase beside TATA
Institute in Ward No.04, BBMP, Bangalore.
- * Reference : BBMP/AEE/YNSD/221/2015-16
- * Sample ID : Drain Concrete
- Size of cubes : 150mmx150mmx150mm
- Cross Sectional Area : 22500 mm²
- Technical Reference : IS: 516-1959 (Reaffirmed 2008)
- * Grade of Concrete : M₂₀
- Compressive Strength as on : 28th day
- Sample Received on : 25.07.2015



Sl.No.	* Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm ²)
1	25.07.2015	22.08.2015	8.099	475.5	21.13
2	25.07.2015	22.08.2015	8.197	498.3	22.15
3	25.07.2015	22.08.2015	8.299	526.3	23.39

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Job No: CTCE/BBMP/W.No.04/NLR/BC/Bitumen/2015-16

28.08.2015

BITUMEN CONTENT AND GRADATION DETERMINATION OF BITUMINOUS CONCRETE As per IS2386 and IRC:SP:11-1984

CUSTOMER	Asst. Executive Engineer, Yelahanka New Town Sub Division, BBMP, Bangalore.
AGENCY	Mr. N. Lokanathreddy, No.05, Kaverinagara, 7th Cross, Kavalbyrasandra, R.T. Nagara Post, Bangalore - 32.
NAME OF THE WORK	Construction of concrete road 22nd Cross in 3rd Phase beside TATA Institute in Ward No.04, BBMP, Bangalore.ore.
REFERENCE	BBMP/AEE/YNSD/221/2015-16
SAMPLE I/D	Roads in 2nd Cross in 3rd Phase beside TATA Institute in Ward No.04, BBMP, Bangalore.
DATE OF TESTING	28.08.2015

BITUMEN CONTENT DETERMINATION



Description	Sample 1	Sample 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	474.5	475.5
3. Weight of Asphalt and Mineral matter Extracted, g	25.5	24.5
4. Weight of Mineral Matter, g	-	-
5. Weight of Ash, g	-	-
6. Weight of Bitumen Extracted, g. (corrected)	25.5	24.5
7. Bitumen content in %	5.10	4.90
8. Average	5.00	

GRADATION AFTER EXTRACTION

TABLE - 1

SIEVE SIZE	Percent Passing, %		JOBMIX
mm	Sample 1	Sample 2	Gradation
19	100.00	100.00	100
13.2	83.36	85.65	79-100
9.5	74.25	74.23	70-88
4.75	57.22	62.32	53-71
2.36	46.36	46.35	42-58
1.18	39.65	35.26	34-48
0.6	33.23	30.22	26-38
0.3	23.65	26.32	18-28
0.15	16.52	17.52	12-20
0.075	5.26	7.23	4-10

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